

TABLE 2.—Data furnished by the Canadian Meteorological Service

DECEMBER 1933

Stations	Altitude above mean sea level, Jan. 1, 1919	Pressure			Temperature of the air						Precipitation		
		Station reduced to mean of 24 hours	Sea level reduced to mean of 24 hours	Depart- ure from normal	Mean max. + mean min. ÷ 2	Depart- ure from normal	Mean maxi- mum	Mean mini- mum	Highest	Lowest	Total	Depart- ure from normal	Total snowfall
	Feet	In.	In.	In.	° F.	° F.	° F.	° F.	° F.	° F.	In.	In.	In.
Cape Race, N.F.	99												
Sydney, C.B.I.	48	29.86	29.91	+0.02	21.3	-6.9	28.5	14.1	48	-10	3.71	-0.92	17.5
Halifax, N.S.	88	29.68	29.79	-1.17	21.6	-6.0	29.8	13.3	46	-10	3.67	-1.45	9.0
Yarmouth, N.S.	65	29.86	29.93	-0.05	25.3	-5.4	32.5	18.1	45	-8	8.19	+3.42	70.2
Charlottetown, P.E.I.	38	29.86	29.90	-0.04	16.3	-8.0	24.0	8.7	42	-17	5.24	+1.58	45.6
Chatham, N.B.	28	29.84	29.88	-0.06	6.7	-10.3	16.0	-2.7	30	-30	4.44	+1.22	44.4
Father Point, Que.	20	29.99	30.02	+0.07	6.4	-9.0	13.6	-7.7	32	-26	2.11	-0.72	21.1
Quebec, Que.	296	29.74	30.08	+0.07	7.2	-8.0	14.9	-5.5	36	-32	3.05	-0.64	30.5
Doucet, Que.	1,236				-7.6		5.6	-20.7	33	-56	3.25		32.3
Montreal, Que.	187												
Ottawa, Ont.	236	29.84	30.13	+1.11	8.8	-8.2	18.2	-6.6	40	34	4.81	+1.90	29.1
Kingston, Ont.	285	29.77	30.11	+0.07	16.8	-6.9	24.5	9.2	45	-30	3.24	0.00	12.4
Toronto, Ont.	379	29.67	30.10	+0.05	24.2	-2.8	31.5	16.9	50	-22	2.97	+0.06	18.8
Cochrane, Ont.	930				-4.2		5.8	-14.2	37	-41	1.94		19.3
White River, Ont.	1,244	28.68	30.08	+1.11	-1.8	-11.5	12.1	-15.7	38	-55	2.76	+1.05	26.4
London, Ont.	808				24.3		31.1	17.5	53	-10	3.54		15.4
Southampton, Ont.	656	29.34	30.07	+0.05	22.8	-3.9	29.0	16.7	47	-15	4.42	+1.44	32.4
Parry Sound, Ont.	688	29.36	30.10	+0.09	14.7	-6.5	23.0	6.5	41	-34	3.79	-0.69	23.7
Port Arthur, Ont.	644	29.38	30.13	+1.14	5.5	-7.7	14.1	-3.1	38	-28	1.33	+0.46	12.8
Winnipeg, Man.	760	29.27	30.17	+1.15	-4.6	-8.7	5.6	-14.8	40	-42	1.57	+0.66	15.7
Minneapolis, Man.	1,690	28.19	30.14	+1.12	-5.1	-10.8	4.3	-14.4	36	-44	1.41	+0.79	14.1
Le Pas, Man.	860				-18.2		-10.8	-25.6	16	-50	2.00		20.0
Qu'Appelle, Sask.	2,115	27.66	30.06	+0.06	-2	-7.6	9.6	-9.9	47	-23	1.34	+0.82	13.4
Moose Jaw, Sask.	1,759							-8.2	52	-30	1.97		19.7
Swift Current, Sask.	2,392												
Medicine Hat, Alb.	2,365	27.36	29.96	-0.01	8.7	-9.5	17.0	-4	57	-22	1.91	+1.36	19.1
Calgary, Alb.	3,540	26.09	29.98	+0.04	3.1	-15.1	11.9	-5.7	56	-26	1.28	+0.69	12.8
Banff, Alb.	4,521												
Prince Albert, Sask.	1,450	28.50	30.20	+1.19	-7.4	-10.2	4.1	-18.9	25	-45	1.61	+0.87	16.1
Battleford, Sask.	1,592	28.27	30.15	+1.16	-8.7	-14.1	-1.6	-15.8	-2	-16	1.50	+1.18	15.0
Edmonton, Alb.	2,150												
Kamloops, B.C.	1,262												
Victoria, B.C.	230	29.54	29.80	-0.17	41.8	+1.6	45.2	38.4	56	30	11.20	+3.22	8.6
Barkerville, B.C.	4,180												
Estevan Point, B.C.	20												
Prince Rupert, B.C.	170												
Hamilton, Ber.	151	30.00	30.16	+0.04	65.7	+1.0	70.3	61.0	77	50	4.10	-0.39	0

## LATE REPORTS FOR NOVEMBER 1933

Cape Race, N.F.	99				35.9		42.6	29.3	55	13	7.75		0.5
Sydney, C.B.I.	48	29.78	29.83	-0.12	33.1	-4.0	40.9	25.4	58	14	6.69	+1.25	5.5
Halifax, N.S.	88	29.58	29.69	-0.32	34.4	-2.9	42.9	25.9	55	14	5.80	+1.14	2
Yarmouth, N.S.	65	29.76	29.83	-0.19	36.1	-3.8	42.8	29.4	58	18	5.13	+0.64	19.6
Charlottetown, P.E.I.	38	29.76	29.80	-0.16	29.8	-5.7	36.4	23.1	55	13	4.57	+0.60	27.1
Chatham, N.B.	28	29.72	29.75	-0.22	24.3	-6.7	34.1	14.5	58	-12	3.26	-0.49	17.6
Doucet, Que.	1,236				9.8		19.7	0	56	-30	4.73		37.1
London, Ont.	808				32.0		38.9	25.2	74	4	4.76		22.8
Banff, Alb.	4,521	25.43	30.09	+1.13	34.2	+8.4	40.5	27.8	49	9	4.44	-1.83	2.4
Kamloops, B.C.	1,262	28.93	30.25	+1.29	39.8	+6.4	44.4	35.3	58	26	4.48	-0.98	T
Estevan Point, B.C.	20				46.8		50.0	43.7	54	36	12.37		0
Prince Rupert, B.C.	170				43.8		48.1	39.5	56	32	25.53		0
Hamilton, Ber.	151	29.90	30.06	+0.01	69.5	+1.8	74.0	65.0	79	58	4.02	-0.36	0

## SEVERE LOCAL STORMS, DECEMBER 1933

[Compiled by MARY O. SOUDER]

[The table herewith contains such data as have been received concerning severe local storms that occurred during the month. A revised list of tornadoes will appear in the Annual Report of the Chief of Bureau]

Place	Date	Time	Width of path (yards)	Loss of life	Value of property destroyed	Character of storm	Remarks	Authority
Texarkana, Ark.	2				\$1,000	Rain and electrical.	Damage to courthouse.	Official, U.S. Weather Bureau.
Crossett, Ark., 3 miles east.	5	6:30 p.m.	100-400		8,000	Tornado	5 persons injured, 1 seriously; property damaged.	Do.
Shreveport, La., 6 miles north.	5	do.	1		7,000	do	5 persons injured; buildings damaged.	Do.
Robeline, La., 4 miles west.	5	8:30 p.m.		1	10,000	do	Several houses demolished.	Do.
Fort Jessup, La.	5			1		do	Considerable unestimated damage to several farm buildings.	Do.
Havre, Mont., and vicinity	5					Wind	Wires blown down; damage to buildings, signs, and fences.	Do.
Monmouth, Ocean, Middlesex, and Camden Counties, N.J.	11			2		Snow and sleet	26 persons injured, 1 seriously, as result of accidents.	Do.
Cleveland, Ohio	11	1-9 a.m.				Gale	Highest velocity 46 miles per hour at 4:20 a.m.	Do.
Scranton, Pa.	11	A.m.				Snow	Highways icy and dangerous.	Do.
Trenton, N.J.	13					Rain, sleet, and snow	6 persons injured; automobiles without chains powerless to move.	Do.
Nooksack to Clearbrook and Sumas, Wash.	13-14				4,000	Ice storms	Telephone and electric service interrupted; orchards damaged.	Do.
Dubuque, Iowa	14	P.m.				Rain and sleet	Wires and streets covered with ice; traffic paralyzed for several hours; walking hazardous.	Do.

1 Mile instead of yards.

## SEVERE LOCAL STORMS, DECEMBER 1933—Continued

Place	Date	Time	Width of path (yards)	Loss of life	Value of property destroyed	Character of storm	Remarks	Authority
Minneapolis, Minn.	14-15	P.m.				Glaze storm	Numerous traffic accidents resulted	Official, U.S. Weather Bureau.
Oklahoma, Panhandle	14					Heavy sandstorm	Visibility reduced to 100 yards, delaying traffic and necessitating the use of artificial light during midday.	Do.
Madison, Wis.	14					Glaze	Streets, sidewalks, and windshields covered with glaze from freezing mist; walking hazardous.	Do.
Milwaukee, Wis.	14			1		Rain and wind	Rain froze as it fell; wires blown down; man killed and 9 persons injured in automobile accidents; 15 pedestrians injured by falling.	Do.
New York City, N.Y.	15	A.m.		3		Snow and sleet	All railroad and motor service interrupted; service abandoned on some elevated lines; at least 3 deaths caused by down-pouring ice; Coast Guard reported that the Hudson River was frozen from Poughkeepsie to Albany trapping 6 cargo-laden ocean freighters in the ice pack.	Do.
Scranton, Pa.	15	do.				Rain and sleet	Rain and sleet froze as it fell; streets and highways in dangerous condition.	Do.
Trenton, N.J.	15	3:10 p.m.				Rain	Rain froze as it fell and formed smooth glaze causing motorists and pedestrians to experience difficulty; 6 persons seriously injured.	Do.
Buffalo, N.Y.	15					do.	Rain froze as it fell causing unusually slippery conditions resulting in numerous accidents and much delay in traffic.	Do.
Havre, Mont.	16-17	P.m.				Wind	Wind drifted the loose snow having a blinding effect on persons out-of-doors; travel suspended on side roads; traffic seriously impeded on highways by snowdrifts; trains many hours late.	Do.
Shreveport, La., 10-15 miles northwest.	17	8:15-8:30 a.m.	100	4	9,000	Tornado	19 persons injured; buildings damaged; slight damage to crops and timber; path 8 miles long.	Do.
Aberdeen and Hoquiam, Wash.	17					Flood and gale	An 11-foot tide accompanying a tremendous down-pour of rain; business districts flooded; on banks of the Chehalis River all available small boats were rushed to rescue of families marooned in their homes.	Do.
Chimacum, Wash.	17					Ice storm	Damage to telephone and electric lines and to orchards; damage from this storm included in estimate of storms on 13-14th at Nooksack to Clearbrook and Sumas.	Do.
Walla Walla, Wash.	17				500	Wind	Telephone and transmission wires and several large trees blown down.	Do.
Sixprong, Wash., and vicinity	18					Gale	Damage to buildings and roofs.	Do.
Walters, Okla.	18-19					Glaze and sleet	Damage to utility lines; amount not estimated.	Do.
Buffalo, N.Y.	20					Snow and glaze	Stormy conditions in the afternoon, when snow fell causing traffic delays and several accidents.	Do.
Binghamton, N.Y.	20-21					Snow and ice	Motorists and pedestrians found traveling hazardous.	Do.
Helena, Mont.	21					Wind	Wind was especially severe, reaching a corrected maximum velocity of 48 miles per hour at 8:17 p.m., highest velocity ever recorded at Helena during any December.	Do.
Shoshone County, Idaho	3d week				200,000	Excessive rain and flood	Considerable damage to highways, railroads, and private property.	Do.
Havre, Mont.	23	8:15 a.m., 1:45 p.m.				Wind and snow	Blizzard conditions prevailed; new snow was blown violently about the streets and open prairie; visibility in town 1/2 to 1 block.	Do.
Chicago, Ill.	25-26			6		Snow	Snow and ice covered streets impeding traffic; 6 deaths due to exposure; 113 snowplows kept busy all night of 25th.	Do.
New Haven, Conn.	26					do.	10 inches of snow fell; much trouble to traffic; roads blocked.	Do.
Michigan City, Ind., and South Haven, Mich.	26			8		Wind and snow	2 fishing tugs capsized and the crews drowned.	Do.
Boston, Mass., and vicinity	26			3		Snow and sleet	Almost a foot of snow fell in Boston; trains from New York and west running an hour late at 8 p.m. and terminal congestion had disorganized commuting trains; 3 deaths in Boston attributed to the storm.	Do.
Cleveland, Ohio	26	12 p.m., 8 a.m.				Heavy snow	Depth of snow 2.3 inches.	Do.
Rochester, N.Y.	26-27					Snow	9 inches of snow fell causing little interruption to traffic.	Do.
New York City, N.Y.	26-30					do.	10 inches of snow fell; streets slippery; 50 or more persons died of exposure and several hundred treated because of low temperature; sleighing and skating in and around the city for 4 days; sleet on 3 days and glaze on 4 days.	Do.
Scranton, Pa.	29-31			1		Snow and sleet	Minimum temperature -10 on 29th; Western Union reported all wires to New York out due to snapping from cold; morning weather reports over an hour late coming from New York; one death due directly to cold on the 30th.	Do.
San Gabriel Drainage Basin, Calif.	31			44		Torrential rains	Rain caused the death of 44 persons in San Gabriel Drainage Basin; much damage occurred in portions of Los Angeles, County.	Do.